

### **LISTING OF CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### **Listing of Claims:**

What is claimed is:

1. (Currently Amended) A method for supporting a geographical-based service for at least one terminal node in a communications system, the method comprising:

- (a) determining a first geographical position that is associated with a first terminal node;
- (b) inserting the first geographical position and a specified radius into a message header of a first datagram, the specified radius being indicative of a serving area for the geographical-based service; and
- (c) sending, by the first terminal node, the first datagram;-
- (d) receiving, by another terminal node, the first datagram;
- (e) determining another geographical position, the other geographical position being associated with the other terminal node; and
- (f) if the other terminal node is within an approximate circular area, accepting the first datagram, wherein the approximate circular area is specified by the specified radius in relation to the first geographical position.

2. (Original) The method of claim 1, wherein the first geographical position is indicative of an approximate location of the first terminal node.

3. (Original) The method of claim 1, wherein the first geographical position is indicative of an approximate destination position.

4. (Original) The method of claim 1, wherein (a) comprises:

(i) acquiring the geographical position by the terminal node with a Global Position Satellite (GPS) location determination module.

5. (Original) The method of claim 1, wherein (a) comprises:

(i) obtaining the first geographical position from a serving network.

6. (Original) The method of claim 1, wherein (a) comprises:

(i) obtaining the first geographical position through a user interface.

7. (Original) The method of claim 1, wherein (a) comprises:

(i) acquiring the geographical position by utilizing a time difference of arrival (TDOA) technique.

8. (Original) The method of claim 1, wherein (b) comprises:

(i) selecting a selected datagram; and

(ii) inserting the geographical position into a message header of the selected datagram.

9. (Currently Amended) The method of claim 1, further comprising:

~~(g)-(d)~~ inserting an indicator into the first datagram, wherein the indicator restricts processing of the first geographical position by another entity of the communications system.

10. (Original) The method of claim 1, wherein the datagram complies with an Internet Protocol version 6 (IPv6) specification and wherein (b) comprises inserting the first geographical location into an extension header of the first datagram.

11. (Original) The method of claim 10, wherein the extension header comprises a destination option header.

12. (Original) The method of claim 10, wherein the extension header comprises a hop-by-hop header.

13. (cancelled)

14. (Original) The method of claim 1, wherein the communications system comprises a wireless system and the first terminal node comprises a mobile node.

15. (Original) The method of claim 1, wherein the first terminal node is selected from the group consisting of a wireless telephone, a workstation, a personal computer (PC), and a stationary communications device.

16. (Original) The method of claim 1, wherein (a) comprises:

- (i) selecting a technique for determining the first geographical position.

17. (Currently Amended) The method of claim 16, further comprising:

~~(g)-(d)~~ inserting a technique identification into the message header of the first datagram, the technique identification identifying the selected technique for determining the first geographical position.

18. (Original) The method of claim 1, wherein the first geographical position comprises an approximate longitude and an approximate latitude of a position of the terminal node.

19. (Cancelled)

20. (Currently Amended) The method of claim 19, further comprising:

~~(g)-(h)~~ displaying, by the other terminal node, information that is indicative of the first geographical position.

21. (Original) The method of claim 1, wherein the first datagram is contained in a stream of datagrams.

22. (Currently Amended) A computer-readable medium having computer-executable instructions for supporting a geographical-based service for at least one terminal node in a communications system performing the steps of:~~the method as recited in claim 1~~

- (a) determining a first geographical position that is associated with a first terminal node;
- (b) inserting the first geographical position and a specified radius into a message header of a first datagram, the specified radius being indicative of a serving area for the geographical-based service;
- (c) sending, by the first terminal node, the first datagram;
- (d) receiving, by another terminal node, the first datagram;
- (e) determining another geographical position, the other geographical position being associated with the other terminal node; and
- (f) if the other terminal node is within an approximate circular area, accepting the first datagram, wherein the approximate circular area is specified by the specified radius in relation to the first geographical position.

23. (Currently Amended) The computer-readable medium of claim 22, further having instructions for performing the step of:~~A computer-readable medium having computer-executable instructions for performing the method as recited in claim 9.~~

(g) inserting an indicator into the first datagram, wherein the indicator restricts processing of the first geographical position by another entity of the communications system.

24. (Canceled)

25. (Original) A method for supporting at least one geographical-based service, the method comprising:

- (a) determining a geographical position that is indicative of an approximate location of a mobile node;
- (b) determining a specified radius, the specified radius being a maximum distance from the geographical position;
- (c) receiving an announcement, the announcement containing an identification of a service, a service geographical position, and a service radius, the service geographical position and the service radius being associated with a network entity supporting the service;
- (d) determining whether a service area corresponding to the service geographical position and the service radius is within a circular area, the circular area being determined by the geographical position and the specified radius;
- (e) if the service area is within the circular area, including the identification of the service in a filter to designate that the service is acceptable;
- (f) receiving a datagram that supports the service;
- (g) if the service is acceptable, accepting the datagram; and
- (h) if the service is not acceptable, rejecting the datagram.

26. (Original) The method of claim 25, further comprising:

- (i) detecting that the mobile node has moved to another geographical position;
- (j) in response to (i), determining if the service is acceptable; and
- (k) modifying the filter in accordance with (j).2.

27–46. (Canceled).

47. (Currently Amended) The method of claim 1, further comprising:
- ~~(g)~~(d) inserting an indicator into the first datagram, wherein the indicator restricts processing of the first geographical position and a destination location by another entity of the communications system.
48. (New) The method of claim 25, wherein (a) comprises:
- (i) acquiring the geographical position by the terminal node with a Global Position Satellite (GPS) location determination module.
49. (New) The method of claim 25, wherein (a) comprises:
- (i) obtaining the geographical position from a serving network.
50. (New) The method of claim 25, wherein (a) comprises:
- (i) obtaining the geographical position through a user interface.
51. (New) The method of claim 25, wherein (a) comprises:
- (i) acquiring the geographical position by utilizing a time difference of arrival (TDOA) technique.
52. (New) The method of claim 25, wherein (a) comprises:
- (i) selecting a technique for determining the geographical position.

53. (New) The method of claim 25, wherein the geographical position comprises an approximate longitude and an approximate latitude of a position of the mobile node.